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EXAMINER

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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/658,734
Filing Date: September 09, 2003
Appellant(s): FRANK ET AL.

Frankie W. Wong
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 06/30/2010 appealing from the Office action mailed 01/07/2010.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

US20020085719A1	Crosbie	July 4, 2002
US006069871A	Sharma et al.	May 30, 2002

(9) Grounds of Rejection

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1-22 & 24-46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Crosbie (US20020085719A1) in view of Sharma et al. (US006069871A)

1.1 Regarding claim 1, Crosbie discloses a method for communication, the method comprising:

Receiving one or more polling message from an access device by one or more of a plurality of access points in a hybrid wired/wireless local area network [receiving service request message from mobile device by access point in a hybrid wired/wireless local area network [hybrid wired/wireless network: Figure 1] [service request message: 0044];

determining a load on said one or more of said plurality of access points for optimal loading balancing [Roaming server i.e., switch: 0035] [In responsive to service request message, Roaming server determines loads on relevant access points and centrally controls the network based on determined loads on access points for load balancing among access points and improving the radio link quality of service: 007, 0042-0047 & 0055]; and

Communicating information of said determined optimal load balancing for said one or more of plurality of access points to said access device, wherein said access device selects [communicating less congested access point to mobile device for mobile device to select less congested access point: (0044 & 0045)] and re-establishes communication with one or more of said plurality of access points based on said communicated information of said determined optimal load balancing [communicating the mobile device to re-establish with less congested access point based on said communicated information of said determined optimal load balancing: 007, 0042-0047 & 0055].

Thus, Crosbie discloses that communication set up and hand-off management centrally controlled by roaming server i.e., claimed switch according to load information of access points to achieve network optimal load balancing [0044] but does not explicitly disclose communicating a load of access point to a switch in response to polling message i.e., service request message.

Sharma et al. also discloses the centrally controlled optimal load balancing method in a wireless network [see Figures] in which access points i.e., Base stations

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communicate load information to the switch i.e., BSC in response to mobile device service request message [Column 4, Line 65-Column 5, Line 60].

Therefore, it would have been obvious to one of ordinary skilled in the art at the time of invention of made to modify the Crosbie's optimal load balancing method as taught by Sharma et al. to modify load balancing method according to claim. One of ordinary skilled in the art at the time of invention of made would have been motivated to do this for efficient communication.

1.2 Claim 9 is rejected for the same reason as stated above in Claim 1 rejection because claimed executing steps are substantially close to corresponding method of claim 1. The modified method executed by wireless station and access points and switch must have stored computer programs and programming codes for executing as claimed in claim 9 because wireless stations and access points and switch are programmable computing devices.

1.3 Claim 27 is substantively similar to claim 1 rejected for the same reason as stated above in claim 1 rejection. It would have been obvious to one of ordinary skilled in the art that the modified method executed by wireless station and access points and switch must be configured to transmit, receive according to the claim 27 method.

1.4 Claims 17 & 37 are system claims rejected for the same reason as stated above in Claim 1 rejection because claim 17 & 37 systems execute the method which are

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substantively similar to corresponding method of claims 17 & 37. The system executed according to the modified method must comprise transmitters, receivers, controllers and processors as claimed because wireless stations and access points and switch are programmable computing devices.

1.5 As regards to Claims 2, 10 & 18, it would have been obvious to one of ordinary skilled in the art that modified system and method discloses the according to claims 1, 9 & 17, comprising access points, which must be in operating range of transmitting wireless station as claimed in order to receive service request message [according to 802.11 protocol: background of Crosbie].

1.6 As regards to Claims 3, 4, 11, 12, 19, 20, 28, 29, 30, 38, 39, 40, it would have been obvious to one of ordinary skilled in the art that modified method and system discloses the method according to claims 2, 10, 18, 27 & 37 comprising selecting an access point from said plurality of access points having a least load and based on a received signal strength of said plurality of access points [mobile selects the access points with best quality of service: (Crosbie: 0044-0047). Official Notice is also taken the concept and advantages for selecting access point for optimal load balancing based on RSSI and load is well known to one of ordinary skilled in the art at the time of invention of made and does not constitute patentable distinction from prior art methods.

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1.7 As regards to Claim 26, it would have been obvious to one of ordinary skilled in the art the modified access point is one or more of: a bandwidth management controller, a quality of service controller, a load balancing controller, a session controller and a network management controller because optimal load balancing is controlled and processed via modified access point [see claim 1 & 17 rejections as stated above].

1.8 As regards to claim 31 and 41, it would have been obvious to one of ordinary skilled in the art that mobile device in modified method and system would be configured to broadcast one or more polling message as claimed because modified method and system is based on 802.11 standard which supports operation based on active scanning or passive scanning. It should be noted that claimed polling method would have been obvious matter of design choice and does not constitute the patentability distinctions from prior arts and existing wireless LAN or other short range communication protocol standards.

1.9 Regarding Claims 5-8, 13-16, 21, 22, 24-25, 32-36, 42-46, it would have been obvious to one of ordinary skilled in the art that the modified method and system would teach messaging protocol i.e., communicating according to wired/wireless LAN protocol and messaging sequences according to claims for communicating between access points and switch as claimed because modified method and system is centralized load balancing control method and system. It would have been obvious to one of ordinary skilled in the art that load information communicating between each of access points

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and switch according to modified method is aggregate load of each access points in order to determine and distribute loads across the network to achieve optimal load balancing.

(10) Response to Argument

1. Appellant argues that Crosbie's method and system modified in view of Sharma et al. does not disclose according to claimed invention as recited in Claims 1, 9, 17, 27 and 37 for the following reasons.

(a) Crosbie **does not disclose polling message** [Appeal Brief: 18-23].

(b) Sharma does not teach a switch (MSC 102) querying the connected access points for load information. Instead base station controller (not the MSC 102) queries the connected access points for load information [Appeal Brief: 23-25].

(c) Crosbie does not suggest access device selects and reestablishes communications with access point based on said communicated information of said determined optimal load balancing because it is the switch (i.e., roaming server 22) and not the access device as recited in the claim (i.e., mobile device 26) which makes the

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decision to select and establish with the access point. Instead the switch (i.e., roaming server 22) directs the mobile device to establish with the access point [Appeal Brief: 26-30].

1.1 As regards to argument (a), Appellant argues that Crosbie **does not disclose polling message** according to claimed limitation

“receiving **one or more** polling message from an access device by **one or more** of a plurality of access points in a hybrid wired/wireless local area network; responsive to said **one or more** polling message, communicating a load on said **one or more** of said plurality of access points to a switch, wherein said switch determines optimal load balancing for **said one or more** of said plurality of access points based on said communicated load”

because service request message as disclosed by Crosbie does not cause access point to communicate the access point load information to roaming server 22, (the claimed switch) (i.e., responsive to said polling message, communicating a load on said access point to a switch) [Appeal Brief: 18-20].

Examiner respectfully disagrees. Crosbie discloses that service request message from access device (mobile device) cause access point to communicate to **the roaming server 22 (herein after, claimed switch)** [Crosbie: paragraph 0044] [also see

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007, 0035, 0042-0047 & 0055]. Although service request message does not cause access point to communicate the access point load to the switch, the switch determines the access point load in response to service request message [Crosbie: paragraph 0044] [also see 007, 0035, 0042-0047 & 0055].

Sharma teaches that service request message (i.e., call initiation) from access device (mobile device) causes network control device such as base station controller queries base station for load information [Column 4, Line 65-Column 5, Line 60]. Therefore, it would have been obvious to one of ordinary skilled in the art at the time invention was made would realize that modifying the switch so that received service request message causes the switch to communicate access point for the access point load as taught by Sharma's load determining method i.e., querying base station load in response to received service request message would teach claimed polling message according to claimed invention

i.e.,

“receiving **one or more** polling message from an access device by **one or more** of a plurality of access points in a hybrid wired/wireless local area network; responsive to said **one or more** polling message, communicating a load on said **one or more** of said plurality of access points to a switch, wherein said switch determines optimal load balancing for said **one or more** of said plurality of access points based on said communicated load”.

Therefore, appellant arguments are not persuasive.

1.2 As regards to Appellant argument (b), it should be noted that Crosbie's load balancing method and system is modified by modifying access point load determining feature of the switch (i.e., to communicate access point to determine access point load in response to received service request message) as taught Sharma's base station load determining feature of base station controller (i.e., communicating base station to determine base station load in response to received service request message). It should be noted that Crosbie's switch is not modified by replacing with BSC or MSC of Sharma's system.

Also in response to Appellant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986). Therefore, Appellant's arguments are not persuasive.

1.3 In response to Appellant's argument (c) that the references fail to show certain features of Appellant's invention, it is noted that the features upon which Appellant relies [i.e., Crosbie does not suggest access device selects and reestablishes communications with access point based on said communicated information of said determined optimal load balancing because it is the switch (i.e., roaming server 22) and not the access device as recited in the claim (i.e., mobile device 26) which makes the decision to select and establish with the access point. Instead the switch (i.e., roaming server 22) directs the mobile device to establish with the access point] **are not**

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positively recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993).

It would have been obvious to one of ordinary skilled in the art at the time invention was made would realize that Crosbie's method modified in view of Sharma et al. would teach

“communicating information of said determined optimal load balancing for said one or more of said plurality of access points to access device, wherein said access device selects and re-establishes communication with one or more of said plurality of access points based on said communicated information of said determined optimal load balancing” according to claimed invention i.e.,

communicating information of said determined optimal load balancing for said one or more of said plurality of access points to access device [read on communicating less congested access point information to mobile device for determined optimal load balancing for access point: (0044 & 0045 of Crosbie) in view of Sharma et al. querying load information method], wherein said access device selects and re-establishes communication with one or more of said plurality of access points based on said communicated information of said determined optimal load balancing [mobile selects and re-establishes communication with the less congested access point based on

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communicated less congested access point information: (also see 007, 0035, 0042-0047 & 0055) of Crosbie) in view of Sharma et al. querying load information method] as stated in Final rejection. Therefore, appellant arguments are not persuasive.

1.4 As regards to claims 2, 10 and 18, Appellant argues that Crosbie does not disclose the alleged "polling message", let a lone "interpreting said one or more polling message by said one or more said plurality of access points, which is located in an operating range of said access device".

Examiner respectfully disagrees. As stated above, Crosbie method and system modified in view of Sharma et al. teaches "polling message" as claimed. It would have been obvious to one of ordinary skilled in the art that access point or access points of modified system and method which is only in operating range of mobile station would receive and interpret polling message and process according to claims 2, 10 and 18 because wireless system are operated in pre-defined operating range. Therefore, appellant arguments are not persuasive.

1.5 As regards to claims 3-4, 11-12, 19-20, 28-30 and 38-40, Appellant argues that Crosbie and Sharma does not disclose or suggest "selecting access point for optimal load balancing based on RSSI signal strength of access points" as recited in claim 3 or "least load" as recited in claim 4 [Appeal Brief: page 32 & 32].

Examiner respectfully disagrees. Crosbie teaches that mobile selects the access points with best quality of service (Crosbie: 0044-0047) i.e., selecting access point having a least load and based on a received signal strength of access points. Therefore, it would have been obvious to one of ordinary skilled in the art that modified method and system teaches the method according to claims 3-4, 11-12, 19-20, 28-30 and 38-40. Therefore, appellant arguments are not persuasive.

1.6 As regards to claim 26, Appellant argues that there is no factual citations to support the claims 26 [Appeal Brief: page 32]. Examiner disagrees.

According to Claim 26, controller of access point is one or more of: a bandwidth management controller, a quality of service controller, a load balancing controller, a session controller and a network management controller because controller communicates a load on access point to a switch as recited in claim 17.

Support for the claim 26 is disclosed as stated above in Examiner's response to Appellant arguments with respect to Parent claims 1 & 17 and claims 1 & 17 rejections as stated in Final office action. As stated above and as stated in office action rejection, modified method and system teaches controller that communicates a load on said access point to a switch [see response to arguments with respect to claims 1 & 17 as stated above] [claim 1 and 17 rejection] i.e., controller of access point communicates a load on access point to a switch. Therefore, controller of access point is one or more of: a bandwidth management controller, a quality of service controller, a load balancing

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controller, a session controller and a network management controller as claimed in claim 16. Therefore, appellant arguments are not persuasive.

1.7 As regards to claims 31 and 41, Appellant argues that there is no factual citations to support the claims 31 and 41 [Appeal Brief: page 32]. Examiner disagrees.

Support for the claims 31 and 41 is disclosed as stated above in Examiner's response to Appellant arguments with respect to Parent claims 1 & 27 & 37 and claims 1 & 27 & 37 rejections as stated in Final office action. Crosbie's hybrid wired/wireless local area network system and method is based on 802.11 standard [see claim 1 rejection, Figure 1, 0034, 0037, 0043 & 0044] wherein mobile station broadcasts beacons based on 802.11 standard [0043]. Therefore, it would have been obvious to one of ordinary skilled in the art that mobile stations in modified method and system teaches broadcasts one or more polling message as claimed because modified method and system is based on 802.11 standard.

For the above reasons, it is believed that the rejections should be sustained.

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(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

Respectfully submitted,

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July 27, 2010

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